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December 8, 1994

The Honorable Susan Ness
Commissioner
Federal Communications Commission
Room 832, Stop Code 0104
1919 M St., N.W.
Washington, D.C. 20054

Re: *Ex Parte* Communications - PR Docket No. 93-61
Automatic Vehicle Monitoring
Amtech Corporation

Dear Commissioner Ness:

As a follow up to yesterday's roundtable discussion with you concerning this proceeding, I am transmitting herewith in "bullet" form the remarks of Dr. Jerry Landt, Vice-President for Research and Development, of Amtech Corporation.

Two copies of this letter and its attachment are being submitted to the secretary for inclusion in the docket file as an ex parte presentation. Please contact me if there are any questions concerning this matter.

Respectfully,

David E. Hilliard

David Hilliard
Counsel for Amtech Corporation

Enclosure
cc: Mr. William Caton
David Siddall, Esq.

Amtech Corporation

PR Dkt 93-61 - Presentation to Commissioner Ness
December 7, 1994

•I am Jerry Landt, Vice-President for Research and Development of Amtech Corporation.

• Amtech is a publicly traded American Corporation capitalized value in excess of $100M - founded 1983 when five former Los Alamos National Laboratory scientists, including myself, paid the government for the right to transfer the products of basic research to the private sector.

• Amtech headquarters are in Dallas; manufacturing and research facilities are in Albuquerque; we employ a total of 355 employees.

• Amtech has sales offices and agents around the world; we are an exporter of American technology, even to Japan.

• Amtech develops and manufactures automatic vehicle monitoring technologies designed to identify a vehicle moving through a defined space such as a toll lane. Amtech "local-area" systems include readers and vehicle-mounted tags.

•Amtech technology has been chosen as the base technology for many standards by rail, trucking and container organizations who have already made heavy financial investments in our nation's infrastructure.

• Major markets include electronic toll and traffic management; intermodal shipping and rail - all key aspects of the *Intelligent Transportation System.*

•More than 700,000 Amtech tags now in use on road vehicles and in intermodal shipping, the vast majority of which are on cars and trucks in use daily. Industry analysts predict over 7 million tags will be in use for toll applications by 2005.

•More than 2 million tags are mounted on 1 million North American rail cars; by early 1995, virtually all 1.4 million rail cars in interexchange service in North America will be tagged with Amtech tags.

•Total domestic investment in Amtech tags and systems exceeds $100 million.

• For Amtech, the most important issues in this proceeding are obtaining a band plan that provides for access to 14 MHz of spectrum including at least two 6 MHz channels and reasonable grandfathering provisions that will protect the investments of our customers, many of whom are public agencies.

- Applications supported by Amtech require instantaneous, on demand, near perfect (100%) operation.

- Currently Amtech tags in toll applications use up to 16 MHz over several channels to cover multiple toll lanes (e.g. 16 lanes at a toll plaza) with read-only tags.

- While read-only tags will continue to be an important segment of the industry, the next generation of read-write technology is already here. Read-write tags that will offer the capability to store information transmitted to the vehicle such as location, amount deducted from a debit account, and traffic advisories.

- Amtech and Motorola are operating a joint venture to manufacture and market read-write tags and systems. These tags are built to an open specification first adopted by the State of California and now being utilized by other jurisdictions. Authorities in Virginia, Florida, and Maine are in the process of specifying or acquiring read-write systems. Other companies are also competing with Amtech in the production of tags and readers for this market.

- Tags built to the California standard require 6 MHz of bandwidth. Local-area AVM systems using other protocols and emerging ISO standards require similar bandwidths.

- At least two 6 MHz channels are needed to serve toll applications.

- If system designers are to have flexibility to resolve interference problems at a particular site and to bring additional functionality, a total of at least 14 MHz should be made available for reliable operation.

- Amtech has proven that it can share spectrum with the Pinpoint wide-area system on a co-primary basis.

- Amtech favors a shared rather than exclusive licensing plan.

- Grandfathering:

  Local area systems should be grandfathered indefinitely if

  currently installed or

  currently in the design and application stage and deployed within three years

  Interference situations should be resolved through mutual cooperation of wide-area AVM and grandfathered local-area systems pursuant to Section 90.173(b) of FCC Rules

  Where actual harmful interference cannot otherwise be resolved, the cost to move the grandfathered local-area system to other frequencies should be borne by the benefitting wide-area system.

- Amtech has thus far not received interference from Part 15 devices and generally does not expect to experience compatibility problems with Part 15 systems. Public agencies that depend on electronic technology to record revenue transactions would, however, be concerned if there were no obligation on the Part of unlicensed device users to remedy interference, just as they expect such devices not to interfere with other important radio systems operated by state and local governments.

- Amtech does not favor auctions in the 902 - 928 MHz band:

  - Would not foster entrepreneurial development of technology;

  - Would discriminate in favor of big players with deeper pockets;

  - Would waste taxpayer dollars invested in existing systems forced to vacate auctioned spectrum and move to what shared spectrum is left; and

  - Would create an implicit economic incentive to decrease the amount of spectrum available for local-area systems.

* * *

● Amtech has played by your rules. We have invested millions of dollars to build a robust technology. We have sought solutions designed to accommodate others in this band. To this end, we have offered you a modified version of the NPRM band plan. We recognize that they may be other equitable solutions. We respectfully urge you to reach a solution that is equitable to the entrepreneurs and the numerous public sector users who depend on stability in the political environment surrounding frequency resources. We urge you to reach a fair conclusion that does not reduce the amount of spectrum available for local-area users.